

### **ABSTRACT**

[0068] Embodiments of the invention provide an image sensor having an improved dynamic range. A pixel cell comprises at least one transistor structure. The transistor structure comprises at least one semiconductor channel region, at least one gate for controlling the channel region, and first and second leads respectively coupled to a source region on one side of the at least one channel region and a drain region on an opposite side of the at least one channel region. The transistor structure has at least two threshold voltages associated with the at least one channel region, and an I-V characteristic of the transistor structure is determined at least in part by the threshold voltages.